

REMARKS

Upon entry of the foregoing amendment, Claims 1-8 and 10 will remain pending in the application. Claims 8 and 10 have been amended. Claim 9 has been canceled. These changes do not introduce new matter, and their entry is respectfully requested.

In the Office Action of December 3, 2008, the Examiner set forth a number of grounds for rejection. These grounds are addressed individually and in detail below.

Claims Rejections Under 35 U.S.C. § 112 Second Paragraph

Claims 8-10 stand rejected under 35 U.S.C. § 112, second paragraph, for being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention, for the reasons set forth on pages 2-3 of the Office Action.

Specifically, the Examiner states that Claim 10 is vague and indefinite in the recitation of “other channels being charged with the same medium.” Claim 10 has been amended to recite “the other channels being charged with the medium containing the cytostatic.” The amendment is supported by the specification at least on page 5, last paragraph.

The examiner also points out that the terms “lengthy” and “short” in Claim 8 are relative terms that render the claim indefinite. Claim 8 has been amended to incorporate the limitations of claim 9. Claim 9 has been canceled.

In view of the foregoing, Applicants respectfully submit that the amendments obviate the grounds for the rejections. Withdrawal of the rejection under 35 U.S.C. § 112, second paragraph is respectfully requested.

Claims Rejections Under 35 U.S.C. § 103(a)

Claims 1-10 stand rejected under 35 U.S.C. § 103(a), as being unpatentable over Metzger et al (hereinafter “Metzger”) in view of Freshney and Parce et al (hereinafter “Parce”), Hafeman et al (hereinafter Hafeman) (U.S. Patent No. 5,766,875) and Hafner for reasons stated on pages 3-5 of the Office Action. Applicants respectfully traverse the rejection.

To establish a *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

In this case, independent Claim 1 of the present application relates to a medium for measuring the efficacy of a tumor therapy on single cell suspensions. The medium comprises the essential amino acids, vitamins, salts and carbon donors, characterized in that the medium comprises from 0.1 to 1 mM buffer of pH 7.0 to 7.4, 5 to 20% by volume fetal calf serum, 4-6 g/l glucose and 2 to 5 mM glutamine as carbon source, wherein the medium does not contain carbon sources other than glucose and glutamine.

In contrast, Metzger generally teaches *in-vitro* prediction of an *in-vivo* cytostatic response of human tumor cells with a fast chemosensitivity assay. Metzger describes using RPMI 1640 for measuring acidification. According to Freshner, RPMI1640 contains 2 g/l glucose, well below the range of 4-6 g/l glucose recited in Claim 1. Further, Metzger also fails to teach or suggest using a culture medium that does not contain carbon sources other than glucose and glutamine.

Hafeman does not cure the deficiency of Metzger. Hafeman generally mentions an RPMI1640 contains 2 g/l glucose and 1,25 mM phosphate. The glucose concentration is well below the range of 4-6 g/l glucose recited in Claim 1. The phosphate is above the 1 mM concentration recited in Claim 1. Hafeman also mentions the use of Modified Dulbecco's Medium which, according to Freshney, contains pyruvate as additional carbon source.

The Examiner alleges that Hafeman teaches modified RPMI and Modified Dulbecco's Medium can be used for measurement of extracellular acidification and, therefore, it would have been obvious for one skilled in the art to use DMEM (containing 4.5 g/l glucose) in Metzger's method. Applicants respectfully disagree.

First, the modified RPMI 1640 disclosed in Hafeman has a composition that is different from the RPMI 1640 medium used in Metzger. For example, the Hafeman RPMI comprises 1.25 mM sodium phosphate, while the RPMI medium of Metzger is a low buffered RPMI with 1 mM phosphate. It is also unclear whether the modified RPMI medium of Metzger differ from the modified RPMI medium of Hafeman in other aspects. Therefore, a person of ordinary skill in the art would not be motivated to replace the RPMI medium of Metzger with DMEM based on the teachings of Hafeman.

Moreover, DMEM comprises pyruvate as an additional carbon source (see. e.g., Freshney). Therefore, if a person of ordinary skill in the art replace the RPMI of Metzger with the DMEM of Hafeman, as suggested by the Examiner, the final medium would be a medium with pyruvate as an additional carbon source, but not a medium that does not contain carbon sources other than glucose and glutamine, as recited in instant Claim 1.

Freshney, Parce and Hafner also not cure the deficiency of Metzger. Freshney generally describes the components of commonly used cell culture media. Freshney does not mention a medium for measuring the efficacy of a tumor therapy on single cell suspensions that comprises 4 to 6 g/l glucose and 2 to 5 mM glutamine as carbon source, wherein the medium does not contain carbon sources other than glucose and glutamine.

Parce generally describes a method for detecting cell-affecting agents with a silicon biosensor. Parce is cited for its teachings on reducing the buffer capacity of the culture medium to about 1 mM. Parce does not teach or suggest a culture medium that comprises 4 to 6 g/l glucose and 2 to 5 mM glutamine as carbon source, wherein the medium does not contain carbon sources other than glucose and glutamine. In fact, the carbon source of the culture medium used in Parce is not defined.

Finally, Hafner is cited for its teachings on using the Cytosensor-Microphysiometer system the detection of pH changes. Hafner also fails to teach or suggest a culture medium that comprises 4 to 6 g/l glucose and 2 to 5 mM glutamine as carbon source, wherein the medium does not contain carbon sources other than glucose and glutamine.

Neither Metzger Hafeman, Freshney, Parce nor Hafner discloses or suggests that a culture medium comprises 4 to 6 g/l glucose and 2 to 5 mM glutamine as carbon source, wherein the medium does not contain carbon sources other than glucose and glutamine as recited in the present independent Claim 1. Consequently, the unexpectedly superior effect of the claimed culture medium renders it particularly well suited for measuring the efficacy of a tumor therapy. One skilled in the art would not be able to produce the invention of present Claim 1 based on Metzger, Hafeman, Freshney, Parce and Hafner without undue experimentation. Thus, it is not obvious to one skilled in the art to derive the present invention from the prior art of record.

Claims 2-10 are patentable over Metzger, Hafeman, Freshney, Parce and Hafner because they depend from Claim 1 and recite additional patentable subject matter.

In view of the foregoing, the grounds for this rejection have been obviated, and withdrawal of the rejection under 35 U.S.C. § 103(a), is respectfully requested.

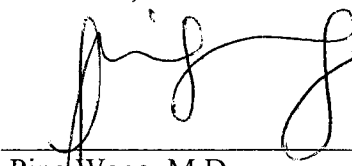
CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of the application, the Examiner is invited to contact Applicants' counsel, Ping Wang, M.D. (Reg. No. 48,328), at 202.842.0217.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read 'Ping Wang', is written over a horizontal line.

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